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PRICING FOR U.S. ARMY TECHNICAL ASSISTANCE FIELD TEAMS (TAFT).(U)

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PRICING FOR U.S. ARMY TECHNICAL
ASSISTANCE FIELD TEAMS (TAFT)

by

Terry E. Brown

September 1979

Thesis Advisor:

J.M. Fremgen

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
		(9)
4. TITLE (and Subtitle)		5. TYPE OF REPORT & PERIOD COVERED
(6) PRICING FOR U.S. ARMY TECHNICAL ASSISTANCE FIELD TEAMS (TAFT)		Master's Thesis, September 1979
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s)		8. CONTRACT OR GRANT NUMBER(s)
(10) Terry E. Brown		(12) 55
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
Naval Postgraduate School Monterey, CA 93940		
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE
Naval Postgraduate School Monterey, CA 93940		(11) September 1979
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES
Naval Postgraduate School Monterey, CA 93940		
		15. SECURITY CLASS. (of this report)
		Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
Foreign Military Sales (FMS) Technical Assistance Field Teams (TAFT)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
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EDITION OF 1 NOV 68 IS OBSOLETE
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Pricing for U.S. Army Technical Assistance
Field Teams (TAFT)

by

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Captain, United States Army
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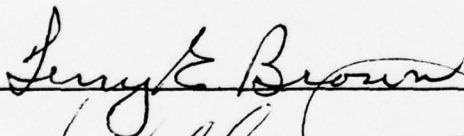
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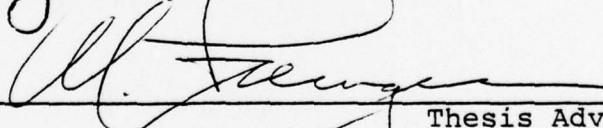
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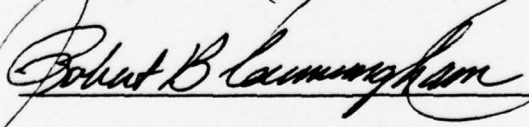
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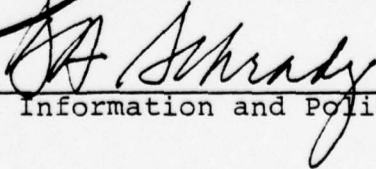
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ABSTRACT

The Technical Assistance Field Team (TAFT) concept is a relatively new method of providing military services to foreign countries under the Foreign Military Sales (FMS) program. Because of this newness, the policies and procedures governing the deployment of an U.S. Army TAFT are still being formulated and revised. One such area is pricing. This document provides a brief overview of FMS, including the purposes, authority, and responsibilities for its administration. The authorized usage and pricing involved in the deployment of an U.S. Army TAFT are discussed. This study attempts to consolidate and/or provide methods that may be used to price TAFT deployments. Because of the lack of sufficient data in several areas, the pricing methods discussed are conservatively biased. Recommendations are presented to refine further the price estimation methods discussed.




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I. INTRODUCTION

A. PURPOSE AND OBJECTIVES

This research study was undertaken to examine various financial aspects of Foreign Military Sales (FMS). Particular attention was focused on the pricing of military personnel services provided under the Technical Assistance Field Team (TAFT) concept. The scope of the research was limited to the pricing of a U.S. Army TAFT, as developed by the U.S. Army Institute for Military Assistance located at Fort Bragg, North Carolina.

An initial objective of the research was to analyze the current U.S. Army pricing policies and procedures for a TAFT and evaluate whether or not they conformed with the Congressional intent of full cost recovery. However, preliminary research and interviews indicated that adequate policies exist but that the procedures were spread throughout numerous publications, where existent [1; 2; 3]. Therefore, the primary objective of the research became to identify, consolidate, and/or reference those pertinent pricing procedures in a manner that would be usable by those involved with TAFT pricing. A second objective was to attempt to provide pricing guidelines for those areas where no official procedures currently existed.

B. RESEARCH METHODOLOGY

Research for this study was conducted in three general

phases. The initial phase involved a literature search and review of documentation to gain a working knowledge and understanding of the overall purposes, policies, and procedures pertinent to U.S. military sales of articles and services to friendly foreign countries. The second research phase involved the review of existing Department of Defense (DoD) and Department of the Army (DA) policies and procedures governing military sales. During this phase, particular emphasis was placed upon the understanding of the nature of a U.S. Army TAFT. The final research phase encompassed the identification, consolidation, and development of pricing guidelines considered pertinent to the deployment of a TAFT.

Material reviewed during the research phases included:

1. Congressional legislation concerning FMS.
2. DoD and DA directives, instructions, regulations, and working papers.
3. Documents available from the Defense Logistics Studies Information Exchange (DLSIE), Fort Lee, Virginia.
4. Technical reports and theses from the Dudley Knox Library, Naval Postgraduate School, Monterey, California.
5. Interviews with DoD personnel involved in FMS pricing.
6. Data collection and interviews with DA personnel at Fort Ord, California, concerning permanent changes of station (PCS) of Army personnel.

C. ORGANIZATION AND OUTLINE

Section I is intended to provide an understanding of the purpose, objectives, scope, and how the research was conducted.

Section II provides a brief overview of the Foreign Military Sales program including the purposes, authority, and responsibilities for its administration. This section also presents the basic U.S. pricing policies for Foreign Military Sales and a summarization of a review of these policies by the General Accounting Office (GAO).

Section III defines the nature of a U.S. Army TAFT, its authorized usage, and development sequence. Further, some representative costs that must be included in the pricing of a TAFT are introduced.

Section IV presents three general areas for which costs must be identified and quantified for the development of a TAFT price. Methods and/or references are presented which enable one to develop such a price. Finally, a summary and a method for the finalization of the TAFT price estimate are presented.

Section V reviews the extent of accomplishment of the research objectives and recommends areas where further research is required.

II. BACKGROUND

A. FOREIGN MILITARY SALES (FMS) DEFINED

Foreign Military Sales are sales of defense articles and services to friendly foreign governments or international organizations [4, p. 5]. The purpose of such sales are:

To promote the foreign policy, security, and general welfare of the United States by assisting peoples of the world in their efforts toward economic development and internal security, and for other purposes [5, p. 424].

As referred to above, defense articles are commodities such as weapons systems, munitions, materials, supplies, or goods used for the purpose of providing military assistance but do not include merchant vessels or, as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011), source material, byproduct material, special nuclear material, or atomic weapons [5, p. 461].

Defense service includes any service, test, inspection, repair, training, publication, technical or other assistance or defense information used for the purposes of making military sales. Training includes either formal or informal instruction of foreign students in the United States or abroad by officers or employees of the United States, contract technicians, or contractors. It also includes correspondence courses, technical, educational, or information publications and media of all types, training aids, orientation, training exercise, and military advice to foreign military units and forces [6, p. 18].

B. AUTHORITY FOR FMS

The authority for the United States Government to make military sales to friendly foreign countries is embodied in the Foreign Military Sales Act of 1968 (PL 90-629). This act states that such sales are authorized to countries which are wealthy enough to maintain and equip their military forces at an adequate strength or are able to assume progressively greater costs of their military preparedness without causing an undue strain upon their economies. Further, such sales should be consistent with United States foreign policy interests in keeping with the spirit and intent of the provisions of the Foreign Assistance Act of 1961, as amended [7, p. 1321].

C. RESPONSIBILITIES FOR FMS

1. The President of the United States

The President is responsible for prescribing procedures to ensure that there is coordination between United States Government representatives within the foreign countries involved in FMS agreements with the United States.

2. The Secretary of State

The Foreign Military Sales Act of 1968, as amended, prescribes that the Secretary of State is:

.... responsible for the continuous supervision and general direction of economic assistance, and military education and training programs, including but not limited to determining whether there shall be a military assistance (including civic action) or a military education and training program for a country and the value thereof, to the end that such

programs are effectively integrated both at home and abroad and the foreign policy of the United States is best served thereby [6, p. 5].

3. The Secretary of Defense (SECDEF)

The Foreign Assistance Act of 1961, as amended, establishes the following responsibilities for the SECDEF:

- a. determination of military end-item requirements;
- b. procurement of military equipment in a manner which permits its integration with service programs;
- c. supervision of end-item use by the recipient countries;
- d. supervision of the training of foreign military and related civilian personnel;
- e. movement and delivery of military end-items;
- f. establishment of priorities in the procurement, deliver, and allocation of military equipment; and
- g. performance of any other functions with respect to the furnishing of military assistance, education, and training within the Department of Defense (DoD) [5, pp. 446-7].

4. Defense Security Assistance Agency (DSAA)

Within the DoD, the Assistant Secretary of Defense for International Security Affairs (ASD/ISA) has been delegated the authority to prescribe policies concerning FMS and/or security assistance. The operating agency responsible for supervising and implementing said policies is the Defense Security Assistance Agency.

5. The Department of the Army (DA)

Within the Department of the Army, responsibilities for the supervision and implementation of activities encompassing FMS have been delegated along functional lines. Major elements pertinent to this thesis are as follows:

a. The Assistant Deputy Chief of Staff for Logistics (ADCSLOG), Headquarters, DA is the primary point of contact within the Army Staff and is responsible for the interface between DA and the Office, Secretary of the Army (OSA), DoD, and other security assistance agencies.

b. The Deputy Chief of Staff for Operations and Plans (DCSOPS), HQDA exercises Army General Staff responsibility for training programs concerning FMS.

c. The Deputy Chief of Staff for Personnel (DCSPER), HQDA, recommends policies concerning United States military and civilian personnel procurement, distribution, management, retention, and separation in support of security assistance.

d. The Comptroller of the Army (COA), HQDA, is responsible for establishing policies concerning the financial aspects of FMS such as funding, accounting, pricing, and financial reporting for FMS.

e. The U.S. Army Training and Doctrine Command (TRADOC) is responsible for the development and execution of security assistance training programs to include funds distribution as required by the COA. TRADOC is also responsible for management of FMS cases involving U.S. Army conducted training and Technical Assistance Field Team support.

f. The Security Assistance Training Management Office (SATMO) is a TRADOC agency located at the U.S. Army Institute for Military Assistance, Fort Bragg, North Carolina. It is responsible for managing CONUS based security assistance teams that support overseas missions and serves as the broker for training support requested by Security Assistance Organizations.

g. Security Assistance Organizations (SAO) are military organizations within U.S. Diplomatic Missions and are responsible for security assistance and other DoD related matters pertaining to the country where they are assigned. Such organizations include Offices of Defense Cooperation, Defense Field Offices, U.S. Military Advisory Groups, and U.S. Military Representatives. Within a particular foreign country, there is one individual designated from one of these organizations as the Senior Military Representative (SMR).

h. The U.S Army Security Assistance Center (USASAC) is responsible for coordinating the routing of Letters of Offer and Acceptance (DD Form 1513) between foreign countries, HQ, TRADOC, DSAA, and other applicable Army agencies.

D. UNITED STATES PRICING POLICIES FOR FMS

1. The Congress

Congressional intent and policies concerning the pricing and ultimate sale of defense articles and services to foreign governments and international organizations are explicitly promulgated in Section 205 of the International

Security Assistance and Arms Export Control Act of 1976 (PL 94-349). Sumarized briefly, this Act states that eligible buyers may be sold defense services providing that the buyers are willing to pay " ... the full cost to the United States Government of furnishing such service." [6, p. 8]. Full cost in this case is meant to include costs such as administrative expenses, asset use charges, and non-recurring costs of re-search, development, and production of major defense equipment. It should be noted that these policies are not wholly applicable to cases involving North Atlantic Treaty Organization (NATO) countries, where financial agreements may be made on the premise of reciprocity. Such cases will not be addressed in this thesis.

2. The Department of Defense

DoD pricing policies concerning FMS are promulgated in DoD Instruction Number 2140.1, "Pricing of Sales of Defense Articles and Services to Foreign Countries and International Organizations", dated 9 March 1977, and parallels those policies set forth by the Congress [4].

3. The Department of the Army

Department of the Army policy for pricing of FMS is set forth in Army Regulation Number 37-60, "Pricing for Material and Services", dated 25 June 1976 [8]. This regulation also calls for the full cost to be recovered when sales are made to foreign governments and international organizations.

E. REVIEW OF DoD PRICING POLICY, PRACTICES, AND PROCEDURES
BY THE GENERAL ACCOUNTING OFFICE (GAO)

According to a report to the Congress rendered by the GAO on 27 September 1978, the Department of Defense has not recovered the full cost of articles and services sold under the auspices of FMS; and this failure has cost the U.S. Government millions of dollars. The report states that the DoD has improved pricing policies which have led to better cost recovery in FMS cases but that full recovery is still not being made and that more effort must be concentrated in this area for greater improvements. The report further states that the major reason for the lack of recovery of the full cost for articles and services sold is the inadequate implementation by the military services of those pricing policies prescribed by the DoD. The report also states that the DoD does not adequately monitor the ongoing cost recovery practices of the services [1].

III. DA TECHNICAL ASSISTANCE FIELD TEAMS (TAFT)

A. TAFT DEFINED

TAFT consists of Department of the Army military and civilian personnel who are sent to foreign countries on a permanent change of station (PCS) basis. Tours of duty are normally for a period of one year. The purpose of TAFT is to provide technical assistance and training on specific equipments, technologies, procedures, weapons, or supporting systems for such items [9].

B. AUTHORIZED USAGE OF TAFT

The TAFT concept was first used in 1973 to support the Imperial Iranian Air Force [9, p. 77]. This and subsequent uses of TAFT are authorized when the training requirement requested by the foreign country is of a magnitude that it cannot be fulfilled by a Mobile Training Team (MTT), Technical Assistance Team (TAT), Field Training Service (FTS), or commercial contract. The missions of these related teams are almost identical to the TAFT with two exceptions. FTS is used primarily for training of the foreign countries' instructor cadre and TAFT is used for periods greater than 180 days, while the others are for periods of less than 180 days. It should be noted that U.S. Army TAFT personnel are not authorized to provide technical assistance or advice to foreign countries armed forces under combat situations [9].

C. TAFT DEVELOPMENT SEQUENCE

The development of an Army TAFT begins when the foreign country submits a request for price and availability data concerning the type of service it would like to acquire. Such requests are required to be quite detailed to minimize problems and further questions arising during processing at approving U.S. agencies. For an example of the types of information required in such requests, see Table 1. These requests are submitted through diplomatic channels to the Department of State [10].

Upon approval of the TAFT request by the Department of State, it is routed to the Department of the Army through DSAA and ultimately to HQ, TRADOC. TRADOC, with the assistance of SATMO, prepares a cost estimate based upon the request for price and availability data and forwards it to the requesting country. After receipt of the cost estimate, the country then requests that the U.S. provide to it a DD Form 1513, "U.S. DoD Offer and Acceptance". The DD Form 1513 is also referred to as a letter of Offer and Acceptance (LOA). Once completed by both countries, this form is a contractual agreement between the U.S. and the foreign country for the services stipulated in it. HQ, TRADOC and SATMO are responsible for the preparation of this LOA. The LOA, ideally, has been prepared, accepted, and funded by the foreign country fourteen months prior to the anticipated need for the TAFT. However, this may not always be the case. Exceptions to the normal leadtime

requirement of eighteen months may be approved, and a delay in any stage of the development sequence will affect the timing of subsequent stages. Table 2 depicts the stages of development of a TAFT and the desired timing [9, p. D-1].

TABLE 1

REPRESENTATIVE DATA REQUIRED FOR TAFT REQUESTS

1. Source (country) of request
2. Justification for the request of the TAFT
3. Specific mission of the TAFT
4. Extent to which the TAFT will fulfill the requirement
5. Requested personnel composition of the TAFT
6. Requested qualifications of TAFT personnel
7. Language qualifications required
8. Time that the TAFT is required to deploy
9. ADP support requirements
10. Special instructions such as health care limitations and/or specific country taboos
11. Training aids requirements
12. Specific training locations
13. Support to be provided within the country such as housing, transportation, recreational facilities, and office space

TABLE 2
TAFT DEVELOPMENT

<u>Time Before Deployment</u>	<u>Development Stages</u>
18 months	<p>State Department receives TAFT request</p> <p>Request approved and forwarded to DSAA</p> <p>DSAA tasks Department of the Army</p> <p>Request forwarded through USASAC to TRADOC and SATMO for action</p> <p>SATMO and Military Personnel Center (MILPERCEN) finalize TAFT composition</p> <p>Cost estimate prepared and forwarded to country by TRADOC</p> <p>Country requests LOA (DD 1513)</p>
15 months	<p>TRADOC prepares LOA</p> <p>LOA staffed with DSAA and applicable Army activities</p> <p>LOA forwarded to requesting country</p>
10 months	<p>Requisitions submitted to MILPERCEN for team members</p>
9 months	<p>Personnel requisitions processed</p>
1 month	<p>Team assembled and prepared for deployment</p>

D. POLICY AND GUIDANCE

Policy and guidance for the many different facets involved in the preparation and deployment of an Army TAFT are embodied in several DoD and DA publications. The following list forms a basis for all such publications:

1. Army Regulation Number 550-50, "Educational and Training of Foreign Personnel by the U.S. Army", dated 28 February 1977 [11].

2. Army Regulation Number 12-15 (draft), Subject as 1 above, dated April 1979 [12].

3. Army Regulation Number 12-7 (draft), "Army Security Assistance Technical Assistance Field Teams (TAFT)", dated 15 February 1979 [9].

4. Army Regulation Number 37-60, "Pricing for Material and Services", dated 25 June 1976 [8].

5. DoD Instruction Number 2140.1, "Pricing of Sales of Defense Articles and Defense Services to Foreign Countries and International Organizations", dated 9 March 1977 [4].

E. SUPPORT OF PERSONNEL

Support for Army TAFT personnel will normally be provided by the Theater Army designated as the Administrative Agent for SAO support in the country where the TAFT is deployed. The level and quality of the support will be the same as that provided to other Army personnel in that country. Such support will be provided on a fully reimbursable basis to the providing agency, since all costs incurred by the TAFT must ultimately be borne by the foreign country [9, p. 10].

F. FINANCIAL MANAGEMENT

The foreign government is responsible for all costs incurred as a result of the TAFT deployment. These may be paid directly by the government or by providing services in kind. The way in which certain of these costs may be estimated prior to deployment of the TAFT is the main theme of this thesis and will be discussed in the following section. Following are the basic categories of cost for which foreign governments are responsible:

1. Military personnel costs
2. Permanent change of station (PCS) costs
3. Additional training costs of team members

IV. PRESENTATION OF DATA

A. TAFT COST ESTIMATION: AN OVERVIEW

This section of the thesis deals with the estimation of the costs incurred as a result of a U.S. Army TAFT deployment. To fulfill the requirement that the full cost be recovered for services provided under the TAFT concept, those items that contribute directly and indirectly to the TAFT deployment must first be identified. Then, these items must be priced realistically.

Costs incurred as a result of a TAFT deployment are situational. They are dependent upon such things as the team composition, country of deployment, previous duty stations of the team members, and support provided to the team by the foreign country. These cost elements must be identified and priced singly. This must be done by using the information included in the countries' TAFT request. This thesis is concerned with the identification, estimation, and/or referencing of costs that must be included in the price of any TAFT. No attempt is made to discuss negotiable cost elements such as in country communications, transportation, and interpreter support of the TAFT. Elements such as these must be estimated strictly by the use of the TAFT request and contact with the requesting country to determine whether they will be provided in kind or not. If not provided in kind, estimations for their cost must also be included in the final TAFT price.

The costs that this thesis will address are considered to be of three general categories. They are military personnel costs, permanent change of station (PCS) costs, and the cost of additional training of the team members. The military personnel costs are relatively simple to estimate once the team composition is known. However, the variables which must be known to determine the PCS costs are numerous; and the estimate cannot be made without the use of a like number of assumptions and data averages. These assumptions and averages will be discussed in detail within the pertinent steps involving the estimation of PCS costs in subsequent parts of this section.

B. COSTS CATEGORIES DEFINED

1. Military Personnel Costs

Military personnel costs are those expenses which are incurred as a result of an individual working for and being compensated by the U.S. Army. Generally, a service member's total compensation is made up of basic pay supplemented by various allowances. Brief explanations of basic pay and the allowances pertinent to the calculation of a service member's total compensation for pricing of a TAFT are shown below [13].

a. Basic Pay

Basic pay amounts are prescribed by public law and are a function of the service member's pay grade and length of service.

b. Basic Allowance for Quarters (BAQ)

BAQ is a non-taxable allowance paid to the service member in lieu of his/her living in government quarters. It is a function of the service member's pay grade and status with respect to dependents.

c. Basic Allowance for Subsistence (BAS)

BAS is a non-taxable allowance paid in lieu of subsistence in kind being provided by the government. It is a fixed monthly amount for officers. For enlisted personnel, it is a function of the adequacy and type of dining facility available to the service member.

d. Clothing Allowance

Clothing allowances for certain officers, such as the reserve components, ROTC graduates, and enlisted members appointed as temporary officers are one-time-only payments. Enlisted personnel receive an initial issue of military clothing upon entrance to the service and receive a monthly uniform allowance thereafter for repair and/or replacement of military clothing.

e. Physicians, Dentists, and Veterinarians Pay

This is a special pay received by certain medical, dental, and veterinary officers. It is a function of the service member's job classification and length of service.

f. Foreign Duty Pay

Foreign duty pay is a special pay entitlement for enlisted service members while on duty outside the continental United States (CONUS) in specific areas designated by the SECDEF. It is paid monthly and depends upon the member's pay grade.

g. Incentive Pay (Hazardous Duty Pay)

Incentive pay is an extra pay to those personnel assigned to hazardous duties such as flying, demolition, parachuting, etc. Generally, there are separate fixed amounts for officer and enlisted personnel. In the case of flying, however, the amount paid is dependent upon the member's pay grade.

h. Proficiency Pay (PRO PAY)

PRO PAY is extra pay granted by the SECDEF to retain highly skilled personnel whose specialty is in short supply or whose specialty requires long and costly training. It is paid monthly, with the amount depending upon the member's specialty and skill level.

i. Family Separation Allowance (FSA)

FSA is an additional monthly payment to personnel entitled to BAQ to compensate the service member for maintaining two sets of quarters or to aid in defraying extra household expenses when he/she is separated from his/her dependents for periods greater than thirty days.

j. Reenlistment Bonuses

Reenlistment bonuses are special cash payments paid to enlisted service members upon reenlistment. These payments may be either a function of the number of the reenlistment (per member) or the scarcity of and/or expense required to replace the skill of the particular service member.

k. Other Compensation

There are other elements of military pay compensation but these will not be discussed in detail. The most significant of these are as follows:

(1) Employer's contribution to FICA. The government pays the customary employer's contribution to social security for employees.

(2) FHA Mortgage Insurance. The government pays a portion of the monthly mortgage insurance charge on all FHA mortgages of eligible active duty personnel.

(3) Servicemen's Group Life Insurance (SGLI). The government pays the extra hazard premium of the SGLI policy for the service member.

2. Permanent Change of Station (PCS) Costs

PCS costs may be defined as those costs incurred by the U.S. Army as a result of the ordering of a service member to a duty assignment that is physically located at a post, camp, or station different from that where he/she is presently assigned. As was discussed briefly earlier, these costs are situational, depending upon the particular service member's status with respect to dependents, PCS movement distance, household goods weight, etc. Entitlements to services for military personnel that cause PCS costs to be incurred are authorized by Volume 1 of the Joint Travel Regulations (JTR) and Army Regulation Number 55-71, "Transportation of Personal Property and Related Services" [14; 15]. Following are those

elements considered to be the most common in a PCS of military personnel.

a. Shipment of Household Goods (HHG)

The shipment of a service member's HHG is authorized upon receipt of PCS orders directing the execution of relocation. The term HHG may be defined as those personal items which are ordinarily associated with a household and its related activities [15, p. 4-1]. Certain items are restricted from shipment as HHG. These are listed in Appendix J to Volume 1 of the JTR and include items such as motorcycles, combustible materials, etc. There exist weight restrictions on the amount of HHG that a service member may ship also. A summary of these weight restrictions is shown in Table 3 [14, p. 8-3]. Such restrictions are based upon the pay grade and, in certain instances, the length of service of the member. The total cost of a HHG shipment is a function of the net weight, locations of pick-up and destination, mode of transportation, and special handling requirements of the shipment.

b. Travel of Service Member and Dependents

Travel expenses of service members and their dependents incurred as a result of a PCS are borne primarily by the government. Such expenses are reimbursed to the member at standard rates or the member is provided services in kind. When the member is reimbursed, the amount paid is a function of the number and the ages of the dependents accomplishing the move with the member and the mileage involved in the move [14].

TABLE 3
HHG WEIGHT RESTRICTIONS

<u>Pay Grade</u>	<u>Maximum Weight (Pounds)</u>
General and General of the Army	24,000
Lieutenant General	18,000
Major General	14,500
Brigadier General and Colonel	13,500
Lieutenant Colonel	13,000
Major and Warrant Officer (W-4)	12,000
Captain and Warrant Officer (W-3)	11,000
First Lieutenant and Warrant Officer (W-2)	10,000
Second Lieutenant and Warrant Officer (W-1)	9,500
E-9	9,500
E-8	9,000
E-7	8,500
E-6	8,000
E-5 and E-4 (with over two years service)	7,000
E-4 (with less than two years service)	1,500
E-3, E-2, and E-1	1,500

c. Dislocation Allowance (DLA)

DLA is paid to service members for the partial reimbursement of incidental expenses incurred as a result of

a PCS, which expenses are not specifically authorized for direct reimbursement. The amount of the payment is dependent upon the member's pay grade, dependency status, and, in instances where the member does not have dependents, on the availability of government housing at the new duty station [14, p. 9-1].

d. Station Allowances

Station allowances are authorized to defray the average costs incurred by service members with duty stations outside CONUS. They are of two types, and authorization for the payment of each is independent of the other. These two types are station housing allowance (SHA) and cost of living allowance (COLA). The amount and authorization for the payment of station allowances are a function of the government housing and dining facility available, the pay grade of the member, status with respect to dependents, and the location of assignment overseas [14, part G].

3. Additional Training

When required for the deployment of an Army TAFT, the additional training is primarily in the nature of attendance at a DoD or DA course of instruction. Such courses are generally refresher courses and are attended on a temporary duty basis. The primary costs incurred as a result of such training are military personnel costs, travel costs of the member from the permanent duty station and return thereto, the cost of the course of instruction, and per diem paid to the member during travel and course attendance.

C. PRICING OBJECTIVE

In the past, all military services have been accused of mismanagement of the financial aspects of FMS and have received much criticism for such from the GAO and Congress. When a foreign country accepts the price estimate provided by the LOA (DD Form 1513), it is understood by both the U.S. and the country that this is only an estimate. Upon completion of the FMS case, this estimate may be adjusted to ensure that the full cost incurred by the U.S. for providing the articles and/or services is recovered [16]. Providing an estimate that is unrealistically low and that ultimately must be adjusted to recover full cost could have serious consequences. These may come in the form of political embarrassment to the U.S. or of resentment and turmoil within the foreign country [16; 17; 18]. For these reasons, the prices provided in LOA's must be conservative and yet competitive.

Interviews with personnel involved with the preparation of LOA's at both Headquarters, TRADOC and USAIMA indicated that their pricing objective is to provide for full cost recovery on every FMS case [2; 3; 23]. For this reason and those cited above, the pricing methods discussed in this thesis are conservatively biased.

D. PRICING OF MILITARY PERSONNEL COSTS

Pricing of military personnel costs may be accomplished once the personnel composition and the time requirements of the TAFT deployment are known. As was discussed earlier, this

information is normally available fifteen to eighteen months prior to the TAFT deployment. It should be noted that, at this point in time, only the grades and the number of personnel required for the deployment may be known.

The calculation of personnel costs must include all time that will be spent by the team members as a direct result of the TAFT deployment. This includes travel time during both temporary duty and PCS, time during the deployment, and time spent during the team assembly and preparation.

After the team composition and time estimates are known, a total price for the cost of military personnel services can be calculated by use of current annual composite pay rates. DoD Instruction Number 2140.1 directs that these standard rates be used for this calculation [4, p. 4].

The annual composite standard pay rates are calculated separately for each military service by pay grade and are updated annually. These rates and instructions for their use may be found in the DoD Handbook Number 7220.9-H, "Accounting Guidance Handbook" [19]. The standard rates take into account " basic pay, incentive and special pay, and certain expenses and allowances included in the active forces Military Personnel appropriations". The rates do not provide for PCS costs, military personnel expenses funded by other than military personnel appropriations, or retirement costs. The rates may be used to calculate personnel costs on an annual, monthly, or daily basis. Adjustments to the rates are made, when applicable,

to account for those items not included therein by application of acceleration factors. Table 4, adapted from DoD Handbook 7220.9-H, depicts those elements included in the standard composite rates and explains briefly how each is developed [19, pp. 252-14,15].

TABLE 4
COMPOSITE STANDARD PAY RATE ELEMENTS

<u>Element</u>	<u>Representation</u>
Basic Pay	Weighted average for longevity increments for each pay grade
BAQ	Average BAQ cost for a military person in each pay grade. (President's budget for BAQ by pay grade ÷ total man years in each pay grade)
Misc. Expense	Average cost of subsistence, station allowances, uniform and clothing allowances, family separation allowances, separation payments, FICA, death gratuities, SGLI, reenlistment and enlistment bonuses, and apprehension of military deserters. (Officer and enlisted computations are separate)
Incentive and Special Pay	Average cost of air crew and submarine duty, other hazardous duty, physicians' and dentists' duty, sea and foreign duty, PRO PAY, and hostile fire pay

DODI 2140.1 and DoD Handbook 2770.9-H direct that the annual composite standard rates will be increased by the acceleration factors for retirement and other personnel costs for FMS

cases. Further, it is directed that, when employees are provided on an hourly or daily basis and the actual time to be worked is less than forty hours or five days, an acceleration factor for leave and holiday accrual will be applied to the standard rates [4; 19; 20]. Explanation of these three acceleration factors and the amounts of each are shown in Table 5 [19, p. 252-15].

TABLE 5
ACCELERATION FACTORS

<u>Factor</u>	<u>Description</u>
Retirement	Rate is 17%, based upon discounted present value of expected future retirement benefits of present active duty personnel.
Other Personnel Costs	Rate is 8% for officers and 23% for enlisted personnel. Provides for BAQ, subsistence, medical, and other personnel costs not included in the composite standard rates.
Leave and Holiday Accrual	Rate is 20%. Adjusts for wages paid during leave and holiday periods.

E. PRICING OF PERMANENT CHANGES OF STATION (PCS) COSTS

As discussed earlier, the determination of the actual cost of a service member's PCS is dependent upon situational factors peculiar to the individual. Therefore, in order to provide a price for PCS costs for a particular TAFT one must pursue either of two approaches. One must either try to obtain all facts

relevant to each team member's particular situation or use generalized estimates for the variable factors. Due to the time that the price estimate is required and the time that the individual team members are identified by name, the former alternative is neither practical nor feasible. Therefore, an attempt must be made to identify and quantify those factors that will be common to most persons involved with a TAFT deployment.

The answers to some basic questions must be addressed before one may attempt to estimate the cost of the individual PCS cost elements discussed earlier. The first of these is whether or not the average service member has dependents and, if so, how many? The most current statistics available at the time of this writing show that 83 percent and 52.7 percent of active Army officers and enlisted personnel, respectively, have dependents. Further, it was found that, on the average, officers have 2.43 dependents and enlisted personnel have 1.64 [21, p. 45]. Therefore, for pricing PCS, it will be assumed that all TAFT members have dependents. The number of dependents used for calculations will be three and two, respectively, for officers and enlisted personnel. For calculation of dependent travel costs, the ages of the dependents are also important. Transportation costs for dependents twelve years old and younger are reimbursed at a lower rate than for older dependents. Also commercial air fares are less for persons in the younger group. It was found that 89.6 percent of dependent children are thirteen years of age or younger and that 84.9 percent are under

the age of ten [21; p. 48]. Therefore, for pricing calculations where age is a factor, it should be assumed that all dependent children are twelve years of age or younger. The assumptions made above are to account for the conservative bias discussed earlier.

Another basic fact to be ascertained comes about as a result of the nature of the TAFT deployment. Since the TAFT is normally deployed for a period of one year, dependents are not authorized to accompany the service member to the duty station overseas [9; 22; 23]. This situation entitles the member to either of several options. He/she is entitled to relocate his/her dependents to any location within CONUS, a location outside CONUS under special circumstances, or the duty station of assignment (if known) following the TAFT deployment. The member may also elect not to relocate the dependents until return from deployment. A study of situations similar to TAFT deployments, where service members were ordered to unaccompanied overseas tours of duty was conducted at Fort Ord, California. This study, encompassing data covering a six month time period, concluded that 72.5 percent of the 5,382 enlisted personnel in the grades of E-1 to E-9 ordered to unaccompanied overseas duty relocated their dependents [24]. It should be noted that an indeterminate number of personnel were not allowed to remain in government quarters at Fort Ord due to housing shortages during this period. Also, no data were collected concerning officer personnel. However, for purposes of conservatism in the pricing mechanism developed

in this thesis, it will be assumed that all TAFT personnel will, upon PCS, relocate their dependents to a location within CONUS other than their prospective new duty station. Further, it is recognized and recommended that further study needs to be done in this area to provide more conclusive facts concerning the relocation patterns of officer and enlisted personnel under these circumstances.

1. Pricing of Household Goods Shipments

The cost of a HHG shipment is dependent upon the weight, distance to be shipped, and the mode of shipment. To determine the most typical weight and distance of a PCS HHG shipment, shipping data were collected from the Fort Ord, California, installation transportation office. These data, extracted from government bills of lading, included officer personnel in the grades of warrant officer to lieutenant colonel and enlisted personnel in grades E-6 to E-9. Data examined covered a period of six months, which included the peak period of volume. These grades were chosen for sampling because they are considered to be those most likely to be in the composition of an Army TAFT [23]. These data were analyzed on an IBM 360 computer utilizing a standard statistical program.

A summary of results of the analysis are depicted in Table 6. A review of histograms representative of the sample weight data for both officer and enlisted personnel indicated that the sample could not be used for a reliable prediction of the weight of a HHG shipment. The data elements, in all cases,

did not appear to be normally distributed. Therefore, no attempt was made to establish a statistical inference from the data. As can be seen in Table 6, the weight range in all categories is quite substantial. Hence, it is recommended that, for the purposes of TAFT pricing, the maximum allowable weight per pay grade (Table 3) be used. This recommendation is based upon the conservative bias discussed earlier. It is also recommended that a larger sample of HHG shipping weights be taken for those pay grades that are likely to be included in a TAFT composition. This should enable one to establish a more reliable conclusion concerning the weight of the typical HHG shipment.

TABLE 6

SAMPLE WEIGHT DATA

	<u>Sample Size</u>	<u>Mean (Pounds)</u>	<u>Range (Pounds)</u>
<u>Officer</u>			
WO1 & O1	19	4,000	590- 7,190
WO2 & O2	46	3,520	500- 8,000
WO3 & O3	126	5,175	500-12,650
WO4 & O4	55	7,765	660-14,960
O5	31	9,545	670-19,120
Combined	277	5,825	500-19,120
<u>Enlisted</u>			
E6	144	3,830	500-12,570
E7	63	3,860	500-10,520
E8	16	5,930	700- 9,390
E9	4	5,900	2,590- 8,000
Combined	227	3,965	500-12,570

EXHIBIT 1
Officer Mileage Data

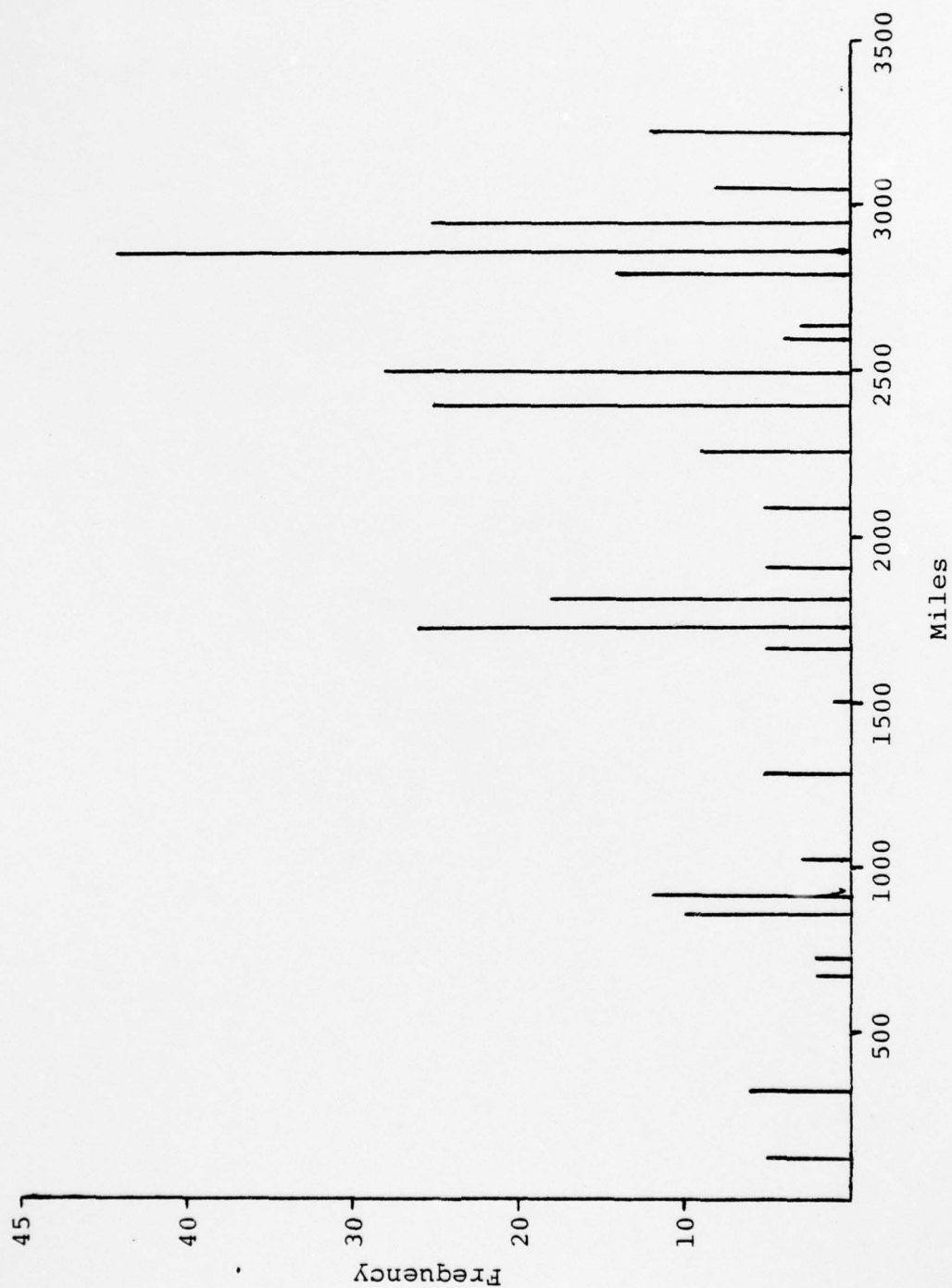
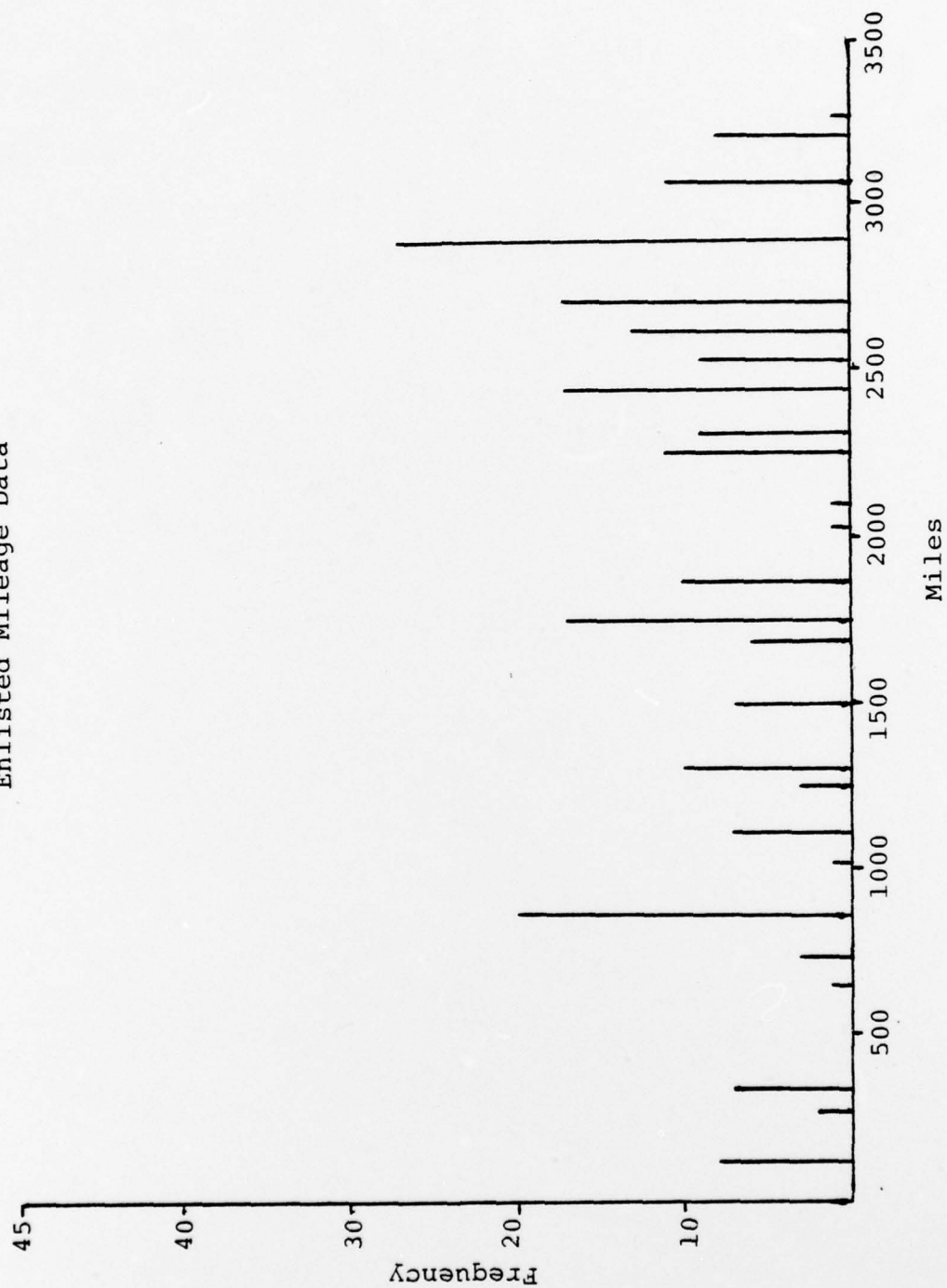


EXHIBIT 2
Enlisted Mileage Data



Analysis of the sample mileage data pertaining to a PCS was conducted in the same manner as for the sample weight data. Results of the analysis are shown as Exhibits 1 and 2. The distances involved in the moves were determined from Army Regulation Number 55-60, which is an official table of distances [25]. The sample data, combined for both officer and enlisted personnel, ranged from 106 to 3,269 miles. However, there was only one data element representing the distance of 3,269 miles. The next longest mileage was 3,208 miles. The mean distances for officer and enlisted moves were 2,199 and 2,003 miles, respectively. A review of the histograms of these data also indicated that they are not normally distributed and that the ranges are substantial. This suggests that an attempt to predict the mileage of a typical PCS from the sample data is unreliable. The data collected in this case may not be representative of mileage for PCS throughout the Army because of the location of Fort Ord and possibly because of the type of units stationed there. Fort Ord is located on the west coast of the U.S. which may cause the PCS mileage to be greater for an individual than if he/she were stationed either in the central or eastern U.S. Further, the fact that Fort Ord is primarily an infantry post may be a factor as to where a majority of the individuals are reassigned. Individuals at Fort Ord may be more likely to be reassigned to other Army posts that also have a high concentration of infantry related units or activities. To provide more conclusive statistics,

data should be collected from several Army posts with different types of troop concentrations and within different regions of the U.S. In keeping with the conservative bias discussed earlier, the most frequently occurring longest mileage of 3,208 miles will be used for the pricing of HHG shipments and other elements where mileage is a determining factor.

Once the above weight and mileage factors have been determined, the price of HHG shipments can be estimated. One such methodology for pricing a shipment is found in the "TRADOC Resource Factor Handbook" [26]. However, this methodology is not recommended because of the lack of currency of the shipping tariff factors used. Shipping tariffs are updated every six months, but the referenced publication is updated only annually. The recommended method involves coordination with the local installation transportation office. Given the weight and mileage factors, the transportation office personnel will be able to provide a reasonable and current estimate for the cost of the shipment because they have the most recent information concerning shipping tariffs and the modes of transportation for HHG shipments.

2. Pricing of Member and Dependent Travel

As discussed earlier, travel costs are dependent upon mileage and the number and age of a service member's dependents. Army Regulation Number 12-15 (draft) stipulates that CONUS and transoceanic travel prices will be estimated by use of commercial air coach rates [12, pp. 31, 32]. These rates may

be obtained through the Scheduled Airlines Ticket Office (SATO) servicing the area. Taking into account the dependency status and mileage factors presented before, the prices should be developed as follows:

a. Member

Obtain from the SATO an estimate of the cost of a coast-to-coast commercial air coach fare. This is based upon the 3,208 mileage factor. Obtain an estimate of the cost of a round-trip commercial air coach fare from the most likely Point of Embarkation (POE) to the country of deployment. Travel times applicable for travel of the member from the present duty station to the country of deployment and return to new duty station will be four days, unless otherwise specified [20]. Costs calculated for the per diem involved should be in accordance with the rates promulgated in paragraph M 4205 and Appendix A of Volume 1 of the JTR [14]. Finally, an amount must be estimated to cover the travel costs of the team members while deployed. Chapter E of DoD Directive Number 5105.38-M, DoD Military Assistance and Sales Manual", directs that this be an amount of \$15,00 per week per team member [27].

b. Dependents

Obtain from the SATO estimates for coast-to-coast air coach fares for one adult and two children for officer personnel or one adult and one child for enlisted personnel. For this estimate, children should be assumed to be less than the age of twelve years for reasons discussed earlier.

3. Pricing of Dislocation Allowances

The price of the dislocation allowances should be determined by applying the BAQ-with-dependents rate for each member of the team. The BAQ rates may be found in the "TRADOC Resource Factor Handbook" on pages 66 and 67 [26].

4. Pricing of Station Allowances

The pricing of station allowances should take into account those variable factors that are included in the TAFT request and the team composition. It should be assumed that the "without dependents" rates will be applicable, since dependents will not accompany members on the deployment. The rates to be applied and instructions for the use thereof are located in Appendices B and C of the JTR [14].

F. PRICING OF ADDITIONAL TRAINING

Determination of the requirement for and the nature of additional training for a TAFT deployment will not normally be known until the individual team members have been identified [23]. However, if it is anticipated that members in certain pay grades will require additional training, an estimate of the price may be formulated. Anticipated amounts and types of additional training may be estimated by analyzing records pertinent to previous deployments of U.S. Army personnel to the particular country under similar circumstances. It is recommended that the price of such training be calculated, when feasible, to include military personnel costs, course of instruction costs, and the costs of travel and per diem.

Per diem should be based upon a travel time of two days to allow for round-trip air travel to and from the training location plus the time of training [20]. Travel and personnel costs should be determined as previously discussed. Course costs may be obtained from Headquarters, TRADOC [20].

G. FINALIZATION OF THE TAFT PRICE

The pricing of military personnel services, member and dependent travel, and additional training costs should be done with respect to the individual TAFT composition. Once a total estimate has been calculated for the composite team, an administrative surcharge of three percent must be applied to the estimate. This surcharge is to provide recovery of those costs incurred as a result of the administrative handling of the FMS case by the U.S. Army [4, p. 15]. After the three percent surcharge has been applied, the calculation of the TAFT price has been completed; but this total price is expressed in current-year dollars. This price must be adjusted for inflation, which is dependent upon the scheduled time of the TAFT deployment [16]. Inflation indices are published and revised by DoD letters when appropriate.

V. SUMMARY AND RECOMMENDATIONS

A. TAFT PRICING SUMMARY

This portion of the thesis is intended to summarize briefly the TAFT pricing methods presented in detail in Section IV. The cost categories are presented in the same order as in Section IV, with external references indicated for the reader's benefit. This part of the thesis accomplishes the objective of consolidation of current U.S. Army TAFT pricing procedures.

1. Pricing of Military Personnel Costs

Formulate an estimate of the total time that TAFT personnel will be involved with the specific deployment. This includes times during actual deployment, temporary duty, PCS, team assembly, and preparation for deployment. Using this time estimate and the team composition found in the TAFT request, apply the annual composite standard pay rates published in the DoD "Accounting Guidance Handbook" [4, p. 4; 19]. The standard rates must be increased by acceleration factors of 25 percent for officers and 40 percent for enlisted personnel. When services are provided on an hourly or daily basis, the standard rates must be increased by a factor of 20 percent [19, p. 252-14]. After these steps have been taken for each member of the team, the sum represents the price for the military personnel services provided by the team.

2. Pricing of Permanent Changes of Station (PCS) Costs

a. Household Goods Shipments

Determine from the JTR [14] the maximum weight allowances for the grades of personnel included in the team composition. Request from the servicing installation transportation officer a cost estimate for movement of the given list of HHG shipments with the appropriate weights and for a distance of 3,208 miles. These shipments should be specified as being within CONUS.

b. Member and Dependent Travel

(1) Member. Obtain from the servicing SATO an estimate of the cost of a coast-to-coast commercial air coach fare for each team member and a round-trip commercial air coach fare from the most likely POE to the country of the TAFT deployment. Calculate costs of travel per diem for each team member for a period of four days in accordance with paragraph M 4205 and Appendix A of Volume 1 of the JTR [14; 20]. Calculate in-country travel costs for each team member at the rate specified in Chapter E of the DoD Directive Number 5105.38-M. Currently, this rate is \$15.00 per week per team member [27].

(2) Dependents. Obtain from the SATO estimates for coast-to-coast air coach fares for one adult and two children for officers or one adult and one child for enlisted personnel. For this estimate, the ages of all children should

be assumed to be less than twelve. This calculation is applicable to all team members, since all members are assumed to have dependents.

3. Pricing of Dislocation Allowances

Apply the BAQ with-dependents rate for each team member. These rates may be located on pages 66-67 of the "TRADOC Resource Factor Handbook" [26].

4. Pricing of Station Allowances

Use the TAFT request to determine when station allowances are authorized. Then, apply the without-dependents rates as instructed in Appendices B and C of the JTR [14].

5. Pricing of Additional Training

When the requirement for and the nature of additional training can be estimated, a price must be developed for it also. A price for military personnel costs is developed as discussed earlier. Course costs must be included and are obtained from Headquarters, TRADOC [20]. Travel costs for members are calculated as before, except per diem should be based upon a travel time of two days to allow for round-trip air travel to and from the training location plus the time of training [20].

6. Finalization of the TAFT Price

Once the individual elements of each area discussed above have been calculated in accordance with the team composition and a total for each cost category calculated, a sum for all categories combined must be calculated. This

sum is then increased by an administrative surcharge of three percent [4, p. 15]. This is then the total TAFT price presented in current-year dollars. This price must be adjusted for inflation by using indices published by DoD. Here, the time period of the deployment is taken in to consideration [16].

B. RECOMMENDATIONS

A second objective of this thesis, to provide TAFT pricing guidelines for those areas where none exist currently has been only partially fulfilled. As discussed in Section IV, there are still some weak areas that require further study. To provide more conclusive statistics for use in TAFT pricing, additional study is required in the following areas:

1. Dependent relocation patterns of personnel proceeding on TAFT deployments.
2. Determination of a typical mileage that TAFT personnel relocate dependents.
3. Determination of the typical weight of HHG shipments for TAFT personnel.
4. Determination of the type and nature of additional training required of TAFT personnel when deploying to specific locations.

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